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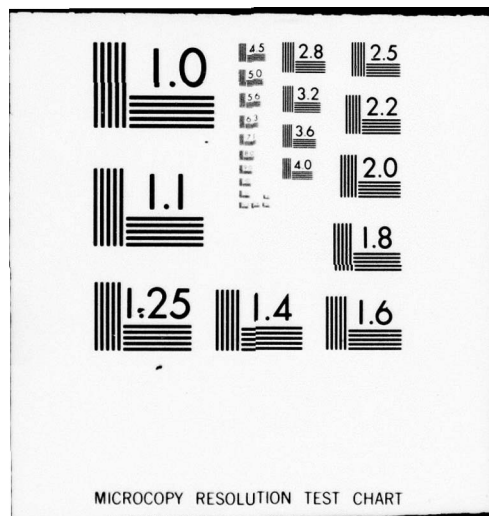
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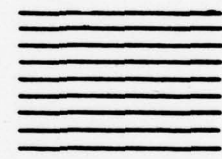
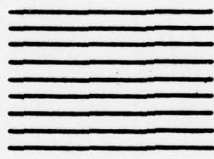


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THE SOVIET NAVY IN THEORY AND PRACTICE

A Comparison of Gorshkov's Doctrinal Statements and Fleet Construction Programs

GEORGE M. CONNELL
Major USMC
1 May 1979

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F O R E W O R D

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ROLAND LAJOIE
LTC, MI
Commanding

SUMMARY

↙ In an effort to determine the wartime missions of the Soviet Navy and its ability to fight at various levels of conflict, the author compares the doctrinal writings of Admiral Sergei Gorshkov with the naval construction programs that have taken place during his twenty-three years as Commander-in-Chief. The author concludes that Gorshkov has successfully accomplished his strategic attack mission by building a ballistic missile submarine force that will be protected in wartime by naval aviation and a surface and subsurface covering fleet. At the same time, Gorshkov has continued to attempt to solve the increasingly difficult problem of strategic defense through extensive research in strategic antisubmarine warfare. While a fixed percentage of the total military budget has affected the construction of ships that would complement other forms of naval warfare, Gorshkov has also achieved a substantial ability to fight at sea during non-strategic conflicts. ↗

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INTRODUCTION

In the 1978-79 edition of Jane's Fighting Ships the editor asserts that "to provide a fleet which is solely reactive to a current threat which may alter with a change in emphasis or government is the result of a basic failure to appreciate not only the form but the longevity of the principles of sea power."¹ In the same vein, Admiral of the Fleet of the Soviet Union, Sergei Gorshkov, states in his preface to Sea Power of the State that "Among the many factors which influence the development of human society, Marxism also considers the geographical environment, most important of which is the World Ocean."² With these thoughts in mind, it is the purpose of this essay to examine various aspects of the Soviet Navy today, in an attempt to determine its primary wartime missions and general concepts of operation. In order to understand the mission capabilities of this navy it is necessary to consider the theories of Admiral Gorshkov, its commander-in-chief since 1956, the construction trends that have led to today's fleet, and the pattern of ship assignments to various geographic areas. Thus it is hoped that by comparing Gorshkov's theories with the realities of ship construction and fleet assignments that have taken place during his tenure we can obtain an insight into Soviet thinking on naval doctrine and missions.

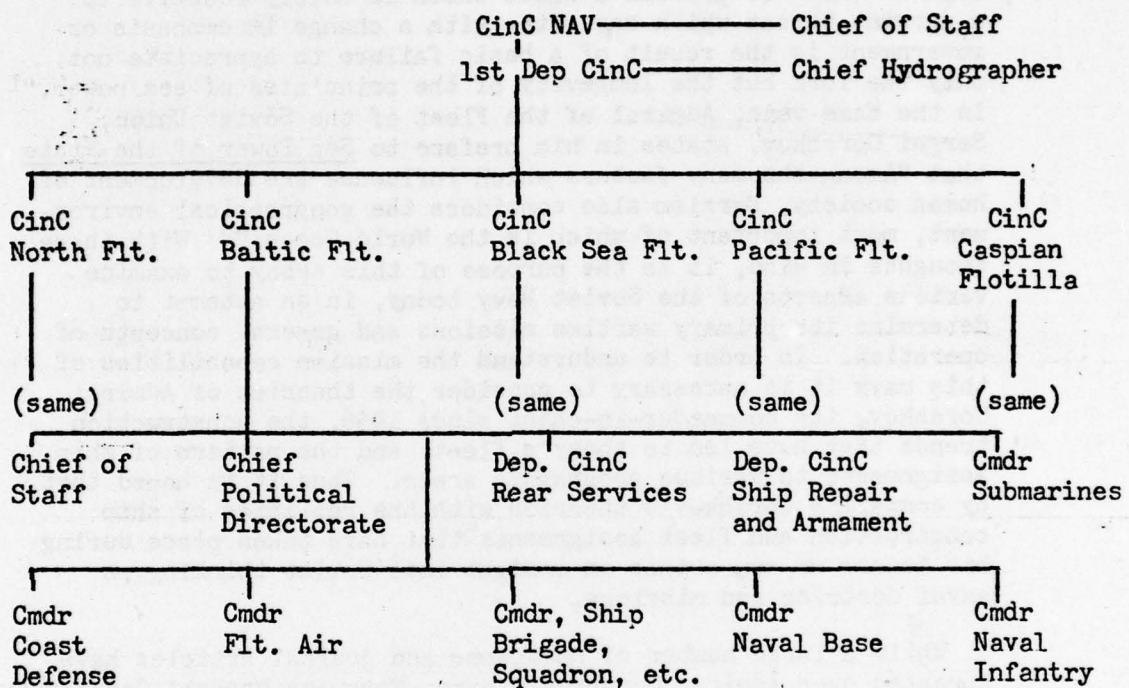
While a large number of newspaper and journal articles have appeared over Admiral Gorshkov's name, Morskaya Moshch' Gosudarstva (Sea Power of the State) is the latest and most thorough expression of his thoughts. Accordingly, it is the primary source for this analysis of Gorshkov's ideas.

Operationally, the Soviet Navy is organized into a headquarters, four fleets and a flotilla, as shown in Figure 1.

Because of its geographical limits, the Caspian Flotilla will not be considered in this paper. Additionally, warships in the Mediterranean, which are considered by the Soviets to be on temporary deployment to the Mediterranean Squadron, will be included in the composition of their parent fleets. As a general rule, surface vessels are provided to the Mediterranean Squadron by the Black Sea Fleet, while submarines normally deploy from the Northern Fleet, presumably because of the Montreux Convention, which permits Black Sea powers' submarines to transit the Dardanelles only for the purpose of being repaired at dockyards outside the Black Sea.³ However, some Black Sea Fleet submarines of the Whiskey and Foxtrot classes occasionally do patrol in the Mediterranean.

FIGURE 1

CHAIN OF COMMAND FOR OPERATIONS, SOVIET NAVY



Source: Understanding Soviet Naval Developments (Washington: Office of the Chief of Naval Operations, January, 1978), pp. 48-49.

GORSHKOV'S DOCTRINE

In February, 1963, less than four months after the Soviet Union's retreat in the Cuban Missile Crisis, Gorshkov ordered his navy to sea when he stated "...every mile at sea is military training... What is required is maximum efforts at sea for all ships...."⁴ While one may argue as to the existence of a causal relationship between those two events, there is no denying that Soviet Navy ship days per year outside local operating areas increased in the ten year period 1965-1974 from 6,300 to 53,100.⁵ In developing his arguments to support such a dramatic increase in naval activity, Gorshkov begins by pointing out that today's ocean is not simply a battleground, but a prize in its own right, capable of supplying vast quantities of minerals, energy (currently 20% of the world's

oil comes from the sea) and food.⁶ It is also a highway that possesses the highest strategic significance in any potential confrontation, a fact made abundantly clear when one considers that virtually every drop of Japan's oil and 95% of West Europe's is imported by ship.⁷ In order to exploit this prize, a nation must be a seapower, which he defines as having strong oceanographic, merchant and fishing fleets, together with a navy and a tradition of seafaring.⁸

With regard to the navy, Gorshkov asserts that "...history shows that states which did not have naval forces could not occupy the position of a great power for a long time."⁹ Furthermore, he notes that throughout history "There have been almost no wars which were purely on land or purely at sea."¹⁰ Turning to Russia in particular, he quotes Tsar Peter I to the effect that "Every potentate who has only an army, has one hand, but one who also has a navy has two hands."¹¹ Following a review of Russian military history he concludes that "The history of wars conducted by Russia convincingly shows that every time the tsarist rulers did not devote sufficient attention to the development of the navy and support it at the level then required, Russia either suffered defeats in war or its peacetime policy did not achieve its required goals."¹² By way of contrast, Gorshkov is able to point to his navy and assert that "The creation of the oceangoing Soviet Navy can stand alongside the most important events of the recent past...such as the creation of nuclear weapons...and inter-continental ballistic missiles."¹³

The importance of a "blue water" Soviet Navy is based upon Gorshkov's belief that since the end of World War II the Soviet Union has been encircled by a hostile alliance of seapowers,¹⁴ who place their main reliance on attacks from the sea.¹⁵ As evidence for this he states that there has been a threefold increase in NATO's submarine launched ballistic missile (SLBM) nuclear warheads since 1970 and that the West intends to further upgrade these forces with the transition to the Trident system and a submarine launched strategic cruise missile.¹⁶ It is interesting to note that in defining the threat, he considers U.S. attack carriers to have the leading role in conventional wars, and also to serve as a "highly trained reserve strategic strike force in a general nuclear war."¹⁷

When discussing the nature of a future war between the superpowers, Gorshkov describes it as being global, brief and intense, with greatly increased combat effectiveness of all weapon systems.¹⁸ While he does not state explicitly that such a war between the superpowers would axiomatically involve the use of nuclear weapons, one receives the clear impression from his writings that a sustained conventional naval war between the United States and the Soviet Union would be unlikely. Therefore, there will be no time to increase the size of the fleet and wars will be fought with peacetime assets.¹⁹

As a result of Russia's geographic position, Gorshkov points out that she has traditionally maintained four widely separated and virtually independent fleets,²⁰ all of which have had to travel through confined waters and over long distances in order to reach wartime operating areas, a problem which has been exacerbated by an historical lack of overseas bases.²¹ But because the nuclear submarine and the ballistic missile lessen dependence on traditional bases,²² in a future war the Soviet Navy will have the ability to carry the battle to U.S. soil.²³ As a result of this new capability Gorshkov states that the navy's "relative weight in the composition of the armed forces is continually increasing."²⁴ This comment is especially interesting in view of the fact that in the preceeding paragraph he concedes that "No country can put unlimited assets into armaments...and economic limits lead one to pick the most important problems..."²⁵ If this is an argument for a larger share of the military budget, then it would appear to have been unsuccessful inasmuch as the CIA estimates Soviet Navy spending between 1967 and 1977 "...grew at a rate slightly slower than that for defense as a whole," averaging between nineteen and twenty-two percent of the defense budget for each of those years.²⁶ Thus Gorshkov's statement, when considered in strictly budgetary terms, is misleading. However, as will be shown later, it is true in terms of numbers of strategic missiles and their ranges and payloads, or in other words, the strategic war-fighting value of his navy.

Having seen Gorshkov's thoughts on sea power, the perceived threat, and the nature of future war, we may now turn to the missions which he believes are the responsibilities of today's Soviet Navy. As a general mission statement Gorshkov writes: "Our country has built a modern navy and sent it to sea for the purpose of protecting our state interests in order to reliably defend us from attacks from the wide ocean sectors."²⁷ While the notion of protecting state interests is never clearly explained, Gorshkov does go on to say that, "...the ensurance of the completion of all missions connected with operations against land targets of the enemy and with the defense of our territory from the blows of his fleet is becoming the main aim of the navy today."²⁸ Thus in the conclusion to Morskaya Moshch' Gosudarstva the author states that: "The influence of the battle at sea on the course of the war as a whole will be manifested chiefly by the degree to which the navy will achieve the capability to strike land targets and undermine the strategic NUCLEAR (emphasis added) potential of the enemy at sea."²⁹ Furthermore, Gorshkov unhesitatingly assigns the accomplishment of both these missions to submarines and naval aircraft: "Today the main forces of our navy are submarines and naval aviation, and the main weapons are ballistic and cruise missiles with nuclear warheads."³⁰

Surface warfare is considered to be an important, but clearly secondary task with six wartime roles:

1. to support submarines, the main strike forces of the navy
2. to maintain uninterrupted two-way communications with the shore
3. to support landings
4. to conduct mine warfare
5. to protect fleet communication lines
6. to operate against enemy lines of communication in coastal or enclosed waters³¹

While surface ships may operate against enemy surface units in confined waters, it is clearly the submarine which has responsibility for open ocean interdiction operations, as Gorshkov states: "Multipurpose atomic submarines are intended for the destruction of surface warships and transports of the enemy, and also combat with submarines."³² Parenthetically, it ought to be noted that the Russian expression "multipurpose submarines" includes cruise missile boats as well as attack submarines.³³

Nor does Gorshkov overlook the peacetime capability of his navy. On the most fundamental level a peacetime navy is valuable because it is a basic part of sea power, which in turn is an integral component of economic power and economic power determines military power.³⁴ At the same time it is capable of "strengthening economic, political, cultural and scientific ties of the Soviet people with the peoples and countries that are friendly to them."³⁵ More bluntly, he states that because it is highly flexible and mobile, a navy can "...employ and extend a military threat on any level, beginning with a demonstration of military power and ending with an amphibious assault."³⁶

In 1965, shortly after sending his navy to sea, Gorshkov commented on the force structure necessary to accomplish the navy's missions and listed the most important assets as being nuclear missiles, nuclear propulsion, submarines, aircraft, and electronic warfare.³⁷ These priorities seem to have not changed, with Gorshkov passing judgement on the Hi/Lo Mix question (that is, quality versus quantity) by stating "...the prevailing criterion in analyzing the capabilities of force groupings existing today is not the quantity of platforms, but their quality as expressed by the sum of the striking power contained in their weapons and combat technical equipment."³⁸ In this regard, he argues strongly for mutual support by combined forces in order to compensate for the inherent weakness in each type of combatant, whether surface, subsurface or aviation.³⁹ This requirement for combined forces is especially stressed in antisubmarine warfare operations (ASW),

with the author asserting that the basic reason for the failure of the German World War I and World War II submarine campaigns was the inability of that country to disrupt such ASW operations by the Allies.⁴⁰

In sum, Gorshkov's writings continually stress two primary general war missions for his navy: strategic attack by fleet ballistic missile submarines and strategic defense, chiefly against Western ballistic missile boats and, to a lesser extent, American attack carriers. In order to accomplish these missions Gorshkov emphasizes the need for combined forces consisting of some diesel as well as nuclear attack/cruise missile submarines,⁴¹ most naval ASW aircraft (both ship based and land based),⁴² and the bulk of the major surface elements.⁴³ However, the steady growth of the ranges of both Western and Soviet SLBMs presents Gorshkov with a dilemma in solving the mission of strategic defense. Such a combined force cannot expect to successfully seek out and attack Western ballistic missile submarines operating several thousand miles from the Soviet Union without the support of the fighter and interceptor aircraft necessary for fleet defense. This in turn would require either an extremely expensive investment in carrier aviation or the development of a large network of overseas naval air facilities. Unless one of these measures is taken, it is reasonable to expect that the primary wartime mission of the surface fleet will be to operate together with landbased aviation in the coordinated defense of Soviet ballistic missile submarine launch areas. That is, within range of aircraft based in the Soviet Union.

FLEET CONSTRUCTION PROGRAMS

Keeping these two basic missions in mind, it will be useful at this point to examine the production trends in Soviet naval construction since the end of World War II, when the USSR had a navy whose "...building programe was almost totally destroyed, along with the major building slips and dockyards."⁴⁴ Figures 2 through 8 show the construction sequence of major Soviet warships classes built since 1945. Note that in less than thirty years the Soviet Union has put approximately 600 submarines in commission with construction programs continuing in all three types of boats: that is, Delta III and Typhoon ballistic missile submarines, Charlie II class cruise missile submarines, and Alfa, Victor II and Tango class attack submarines.⁴⁵ While certainly impressive, one must bear in mind that this post-World War II production figure apparently does not match the full submarine production capacity of the USSR's shipyards, which is estimated to be in the order of 20-25 nuclear boats per year during peacetime, but with the capability of expanding to almost 50 building positions if necessary.⁴⁶ Neither does it rival the

FIGURE 2

ATTACK SUBMARINES (SS/SSN) *

<u>YEAR IN</u> <u>SERVICE</u>	<u>CLASS</u>	<u>PRO-</u> <u>PULSION</u>	<u>PRIMARY</u> <u>WEAPON</u>	<u>NUMBER</u> <u>OBSERVED</u>
1951	Whiskey	Diesel	Torpedo	240
1951	Zulu	Diesel	Torpedo	32
1954	Quebec	Diesel	Torpedo	18
1960	Foxtrot	Diesel	Torpedo	60
1961	Romeo	Diesel	Torpedo	18
1961	November	Nuclear	Torpedo	13
1967	Bravo	Diesel	Torpedo	4
1968	Victor I	Nuclear	Torpedo	17
1971	Alfa	Nuclear	Torpedo	1
1973	Tango	Diesel	Torpedo	5
1973	Victor II	Nuclear	Torpedo	5
Total				413

Sources: John E. Moore, The Soviet Navy Today (London: Macdonald and Jane's Publishers Limited, 1975), pp. 78-83; John E. Moore (ed.), Jane's Fighting Ships, 1978-79 (London: Macdonald and Jane's Publishers Limited, 1978), p. 484; Siegfried Breyer and Norman Polmar, Guide to the Soviet Navy (2d ed. Annapolis: Naval Institute Press, 1977), pp. 139-161; and "The Military Balance," Air Force Magazine, December, 1978, p. 70.

*While all information in this study is unclassified, the data used to develop Figures 2 through 11 was obtained from a variety of sometimes conflicting studies, as shown in the source notes. In cases of great disparity, the most commonly agreed upon figure was used.

FIGURE 3

CRUISE MISSILE SUBMARINES (SSG/SSGN)

YEAR IN SERVICE	CLASS	PRO- PULSION	ORIGINAL PRIMARY WEAPON	NOMINAL WEAPON RANGE(NM)	SUB- SURFACE LAUNCH	NUMBER OBSERVED
1961	Whiskey Twin	Diesel	SSN-3A	200	NO	5
1962	Echo I	Nuclear	SSN-3	200	NO	5
1963	Whiskey Long Bin	Diesel	SSN-3	200	NO	6
1963	Juliet	Diesel	SSN-3	200	NO	16
1965	Echo II	Nuclear	SSN-3	200	NO	29
1968	Charlie I	Nuclear	SSN-7	30	YES	13
1970	Papa	Nuclear	SSN-7	30	YES	1
1976	Charlie II	Nuclear	SSN-7	30	YES	2
Total						77

Sources: Moore, Soviet Navy, pp. 78-83; Moore, Jane's 1978-79, p. 484; Breyer, Guide to the Soviet Navy, pp. 128-138; and Air Force Magazine, December, 1978, p. 70.

FIGURE 4

FLEET BALLISTIC MISSILE SUBMARINES (SSB/SSBN)

YEAR IN SERVICE	CLASS	PRO- PULSION	ORIGINAL PRIMARY WEAPON	NOMINAL WEAPON RANGE(NM)	SUB- SURFACE LAUNCH	NUMBER OBSERVED
1960	Zulu V	Diesel	SSN-4	370	NO	7
1961	Golf I	Diesel	SSN-4	370	NO	8
1961	Hotel I	Nuclear	SSN-4	370	NO	1
1964	Golf II	Diesel	SSN-5	700	YES	10
1965	Hotel II	Nuclear	SSN-5	700	YES	7
1967	Golf III	Diesel	SSN-5	700	YES	11
1968?	Hotel III	Nuclear	SSN-8	4200	YES	1
1968	Yankee	Nuclear	SSN-6	1300	YES	34
1973	Delta I	Nuclear	SSN-8	4200	YES	18
1973	Delta II	Nuclear	SSN-8	4200	YES	13
1977	Delta III	Nuclear	SSN-18	5200	YES	
1978	Typhoon	Nuclear	SSN-18?	5200	YES	?
Total						110

Sources: Moore, Soviet Navy, pp. 73-78; Moore, Jane's 1978-79, p. 484; Breyer, Guide to the Soviet Navy, pp. 118-127; Aviation Week & Space Technology, February 27, 1978, p. 14; Aviation Week & Space Technology, April 3, 1978, p. 17; Air Force Magazine, December, 1978, p. 68; and Armed Forces Journal, March, 1979, p. 16.

1,219 submarines employed by Germany during World War II.⁴⁷ Nevertheless it is an extremely impressive figure when one considers that in 1976 there was a total of only 442 non-Soviet built submarines in commission in all the navies of the world, and this figure includes a large number of U.S. boats constructed during World War II, well before the start of the USSR's present construction program.⁴⁸

The rebirth of the Soviet surface fleet, as shown below, also indicates a strong, consistent desire for a powerful navy. Of particular interest is the emphasis placed on the ASW role of the surface forces. With the exception of the Nanuchka, every class of major surface combatants placed in production during the last decade has ASW as its primary mission. Also worthy of note is the nuclear powered cruiser currently under construction in Leningrad, the first nuclear surface ship in the Soviet Navy.⁴⁹

FIGURE 5

CRUISERS (CG)

YEAR IN SERVICE	CLASS	ORIGINAL PRIMARY WEAPON	NOMINAL WEAPON RANGE (NM)	ASW ROLE	NUMBER OBSERVED
1949	Chapaev	Gun	9	NO	2
1952	Sverdlov	Gun	9	NO	14
1961	Kynda	SSN-3	200	LIMITED	4
1966	Kresta I	SSN-3D	200	LIMITED	4
1970	Kresta II	SSN-14	30 (ASW)	PRIMARY	10
1973	Kara	SSN-14	30 (ASW)	PRIMARY	6
1980?	Nuclear	Unknown	Unknown	Unknown	1
				Total	<u>41</u>

Sources: Breyer, Guide to the Soviet Navy, pp. 162-186; Jean Laboyle, Combat Fleets of the World, 1976/77. Translated by James J. McDonald (Annapolis: Naval Institute Press, 1976), p. 380; Moore, Jane's 1978-79, p. 780; R. T. Pretty (ed.), Jane's Weapon Systems 1977 (London: Jane's Yearbooks, 1977), p. 805; The Military Balance 1978-1979 (London: International Institute for Strategic Studies, 1978), p. 10; and Stars and Stripes, January 21, 1979, p. 28.

As these figures indicate, since 1950 the Soviets have undertaken construction of at least 192 major surface combatants, along with 207 frigates and corvettes. Construction of Kiev class carriers, Kara, Kresta II and a new nuclear class of cruisers, Krivak II destroyers, and Nanuchka and Grisha class escorts continues.⁵⁰ Additionally, during the past 15 years the Kotlin, Krupny, Kildin

FIGURE 6
DESTROYERS (DD)

YEAR IN SERVICE	CLASS	ORIGINAL PRIMARY WEAPON	NOMINAL WEAPON RANGE(NM)	PRIMARY MISSION	NUMBER OBSERVED
1952	Skory	Gun	7	ASW	64
1955	Tallin	Gun	7	ASW	1
1955	Kotlin	Gun	7	ASW	28
1960	Kildin	SSN-1	130	ANTI-SURFACE	4
1961	Krupny	SSN-1	130	ANTI-SURFACE	8
1963	Kashin	SAN-1	17	ANTI-AIR/ASW	20
1971	Krivak I	SSN-14	30(ASW)	ASW }	20
1976	Krivak II	SSN-14	30(ASW)	ASW }	
Total					145

Sources: Breyer, Guide to the Soviet Navy, pp. 187-217; Moore, Jane's 1978-79, p. 780; Pretty, Jane's Weapon System, 1977, pp. 805-806; Couhat, Combat Fleets, p. 380; and The Military Balance, p. 16.

FIGURE 7
ESCORTS

YEAR IN SERVICE	CLASS	ORIGINAL PRIMARY WEAPON	PRIMARY MISSION	NUMBER OBSERVED
1954	Kola	GUN/TORP/MBU	ASW/Escort	24
1955	Riga	GUN/TORP/MBU	ASW/Escort	70
1963	Petya	GUN/TORP/MBU	ASW/Escort	48
1965	Mirka	GUN/TORP/MBU	ASW/Escort	20
1970	Nanuchka	SSN-9	Strike	15
1971	Grisha	GUN/TORP	ASW/Escort	30
Total				207

Sources: Breyer, Guide to the Soviet Navy, pp. 218-235; Moore, Soviet Navy, pp. 121-130; The Military Balance, p. 10; and Air Force Magazine, December, 1978, p. 70.

and Kashin classes of destroyers underwent vigorous and major modernization programs that produced the SAM Kotlin, the Kanin, and the Mod Kildin and Mod Kashin classes.⁵¹

FIGURE 8

AVIATION CRUISERS AND AIRCRAFT CARRIERS (CHG/CVHG)

YEAR IN SERVICE	CLASS	ORIGINAL PRIMARY SYSTEMS			PRIMARY MISSION	NUMBER OBSERVED
		ASW	SURFACE	ANTI-AIR		
1967	Moskva	Helo/ SSN-14	N/A	SAN-3	ASW	2
1976	Kiev	Helo/ SSN-14	SSN-12	YAK-36/ SAN-3	ASW	4
					Total	6

Source: Breyer, Guide to the Soviet Navy, pp. 112-115;
and Stars and Stripes, January 21, 1979, p. 28.

In terms of a commitment to build a large, modern fleet in a relatively short time, the level of the Soviet shipbuilding effort can be seen clearly in the following illustration.

Although somewhat unwieldy, this chart immediately shows the rapid pace of naval construction and conversion in the USSR and the apparent redundancy of type ships produced. On the average, the Soviets have been simultaneously building three classes of attack submarines, two classes of cruise missile submarines, three classes of ballistic missile submarines, one cruiser class, two destroyer classes, two escort classes, and a carrier class, or, in short, they have normally had in concurrent production fourteen different classes of naval combatants. This duplication of effort is a curiosity not found in the West and causes one to speculate as to the underlying reasons.

It could be argued that it is the result of an emphasis on speed of production, or the desire to place as many warships in commission as fast as possible. However, this notion is contradicted by the fact that the Soviet Union has also simultaneously constructed or purchased abroad the sixth largest merchant fleet in the world. While the merchant fleet is important in terms of international prestige, as a vehicle for earning hard currency, and to support Soviet adventures overseas, it is a fleet that is basically unnecessary in war in view of the Soviet Union's relative independence from external sources of raw material.⁵² Moreover, according to the current Five Year Plan (1976-1980), the government intends to increase the size of this merchant fleet by twenty percent of dead-weight tonnage by 1980.⁵³ Finally, despite these construction efforts, there is evidence that Soviet shipyards have not been utilized at anything approaching maximum capacity.⁵⁴ At least two other possible explanations exist: bureaucratic inefficiency and divergent mission requirements.

A bureaucratic explanation of this situation would rest upon such possible causes as competition between design bureaus, lack of skilled labor (e.g., qualified welders for submarine pressure hulls), complexities involving the establishment and changeover of production lines which normally limits the construction of major classes of warships to a single shipyard (i.e., Charlie class at Gorky, Kiev class at Nikolayev South, etc.), or difficulties associated with adjusting production cycles to changes in technology.

While this may be true, perhaps the answer is much more simple: the concurrent production of different classes of similar type ships is the result of the requirement to accomplish completely different missions which have been agreed upon and funded in a logical sequence. For example, the nuclear propelled Victor II and the diesel Tango are both attack submarines and are both currently in production. A possible reason for this could be the fact that diesel submarines, with their smaller hulls, slower speeds and quieter propulsion, are better suited for operations in shallow waters such as the North Sea, White Sea, and the Greenland-Iceland-United Kingdom (GIUK) Gap.⁵⁵ Additionally, they are considerably cheaper to construct and require less crew, both of which are attractive features when faced with a budget, which, as previously noted, has lagged behind the other services for the past ten years.

However, one should be careful not to credit the Soviets with an unerring ability to see into the future. In this light, Figure 9 shows three interesting technological break points: the years 1957-58 in attack submarine production, 1962-63 for ballistic missile submarine construction, and the two year gap of 1969-70 in the production of aviation cruisers or carriers. In each case, one can see a complete break in the construction cycle and the subsequent introduction of a totally new program. 1958 saw the start of two new, advanced diesel attack submarines and the Soviet Union's first nuclear powered boat, while 1963 marked the change from surface launched ballistic missiles to those which could be launched from below the surface. Finally, the Moskva class aviation cruisers, which were apparently intended for operations against Polaris boats equipped with the early model A-1 and A-2 missiles while remaining under the protective cover of Soviet land-based aircraft,⁵⁶ appear to have been technological victims of the increased ranges of the follow-on models of the Polaris and the Posidon system. As can be seen, construction of the two-ship class was halted in 1968 and three years later work was begun on its successor, the larger and more capable Kiev class. These three cases suggest a willingness to abandon an evolutionary approach to naval construction when changes in technology promise quantum increases in combat capability.

FIGURE 9

SOVIET NAVAL CONSTRUCTION AND CONVERSION, 1951-1978

YEARS UNDER CONSTRUCTION (SS/SSN)	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
Whiskey	X	X	X	X	X	X	X																						
Zulu	X	X	X	X	X																								
Quebec		X	X	X	X	X	X																						
Forrest								X	X	X	X	X	X	X	X	X	X												
Romeo								X	X	X	X	?	?																
November								X	X	X	X	X	X																
Bravo																X	X	X	X	?									
Victor I																X	X	X	X	X									
Alfa																	X	X			X	X	X	X	X	X	X	X	X
Echo I																					X	X	X	X	X				
Tango																					X	X	X	X	X	X	X	X	X
Victor II																					X	X	X	X	X	X	X	X	X
(SSG/SSGN)																													
Whiskey Train								X	X	X																			
Whiskey Long									X	X	X	X	X																
Echo I									X	X	X	X																	
Juliet									X	X	X	X	X	X	X	X													
Echo II										X	X	X	X	X															
Charlie I																	X	X	X	X	X	X	X	X	X	X	X	X	X
Papa																	X	X	X	?									
Charlie II																						X	X	X	X	X	X	X	X
(SSB/SSBN)																													
Zulu V						X	X	X	X	X																			
Golf I							X	X	X	X	X																		
Hotel I							X	X	X	X	X																		
Golf II													X	X	X	X	X												
Hotel II													X	X	X	X	X												
Golf III																	X	X	X	X	X	?							
Hotel III																	?	?	?	?									
Yankee																	X	X	X	X	X	?	?						
Delta I																					?	?	X	X	X	X			
Delta II																					X	X	X	X					
Delta III																						?	X	X	X	X	X	X	X
Typhoon																										X	X	X	X
(CA)																													
Chapayev						X																							
Sverdlov			X	X	X	X	X	X	X																				
Kynda							X	X	X	X	X	X	X	X	X														
Kresta I														X	X	X	X												
Kresta II																	X	X	X	X	X	X	X	X	X	X	X	X	X
Kara																		X	X	X	X	X	X	X	X	X	X	X	X
Nuclear																												X	X
(DD)																													
Skory			X	X	?	?																							
Tallin			X	X	X	X	X																						
Kotlin				X	X	X	X																						
Kildin							X	X	X	X																			
Kruony								X	X	X	X	?																	
Kashin									X	X	X	X	?	?	?														
Sam Kotlin									X	X	X	X	X	X	X	X													
Karin																X	X	X	X	X	X	X	X	X	X	X	X	X	X
Krivak I																	X	X	X	X	?	?							
Mod Kashin																		X	X	X	X								
Mod Kildin																			X	X	X	X	?	?					
Krivak II																				X	X	X	X	X	X	X	X	X	X
(ESCORTS)																													
Kola			X	X	X	X	?	?																					
Riga			X	X	X	X	X	X	X	X																			
Petra								X	X	X	X	X																	
Mirke														X	X	X	X	X											
Nanuchka																				X	X	X	X	X	X	X	X	X	X
Grisha																				X	X	X	X	X	X	X	X	X	X
(CHG/CVNG)																													
Moskva														X	X	X	X	X											
Kiev																					X	X	X	X	X	X	X	X	X

Sources: Breyer, Guide to the Soviet Navy, pp. 115-235; Moore, Soviet Navy Today, pp. 60-130; Aviation Week & Space Technology (April 3, 1973), p. 17; Stars and Stripes, January 21, 1979, p. 28; and Armed Forces Journal, (March, 1979), p. 16.

Whatever the reasons behind this approach to shipbuilding, and even though total numbers have shrunk slightly over the years, the net result has been a dramatic change in the composition of the major combat elements of today's Soviet Fleet as compared with the Fleet of 1955, the year before Gorshkov's appointment as Commander-in-Chief.

FIGURE 10
SOVIET FLEET COMPOSITION, MAJOR COMBATANTS,
1955 AND 1978

	1955	1978	
Battleships	3	0	
Gun Cruisers	30	10	
Gun Destroyers	151	38	
Attack Subs	330	195	
Cruise Subs	0	69	
Ballistic Subs	0	94	
Missile Destroyers	0	59	
Missile Cruisers	0	27	
Aviation Cruisers/Carriers	0	4	
<hr/>			
Total:			Change
(1) Surface Ships	184	138	-25%
(2) Submarines	330	358	- 8%
(3) Grand Total	514	496	- 4%

Sources: Jane's Fighting Ships, 1955-56, (London: Jane's Fighting Ships Publishers Company, Ltd., 1955), passim; Understanding Soviet Naval Developments, p. 69; Air Force Magazine, December, 1978, p. 68; The Military Balance, pp. 9-10; Breyer, Guide to the Soviet Navy, p. 120; and Unclassified Communist Naval Orders of Battle, (Washington: Defense Intelligence Agency, November, 1978), pp. 1-2.

While an analysis of gross number and displacement tonnage has obvious limitations in examining the combat capability of a navy, it does provide a useful insight into the ability to conduct sustained fleet operations at sea and rough indications of the range and endurance of the individual ships. Figures 10 and 11 show that while they are four percent fewer in number than in 1955, today's major combatants are, on the average, 126% larger in full load tonnage. It is especially interesting to note the contrast between the surface and submarine fleets. The number of major surface combatants has shrunk by 25% since Gorshkov took office, while the

FIGURE 11

FULL LOAD TONNAGE DISPLACEMENT, MAJOR SOVIET COMBATANTS
1955 AND 1978

	<u>1955</u>	<u>1978</u>	<u>CHANGE</u>
<u>INDIVIDUAL DISPLACEMENT</u>			
Surface Ship	4,844	6,298	30%
Submarine	523	4,020	670%
Average	2,070	4,675	126%
<u>TOTAL DISPLACEMENT</u>			
Surface Fleet Total	891,250	856,594	(-4%)
Submarine Fleet Total	172,530	1,354,750	685%
Grand Total	1,063,780	2,211,344	107%

Sources: Breyer, Guide to the Soviet Navy, pp. 115-235;
and Jane's Fighting Ships, 1955-56, *passim*.

individual displacement of these ships has increased, on the average, by 30%. In dramatic contrast is the submarine fleet, which has increased by only 8% in gross number, but whose individual boats are, again on the average, a staggering 670% larger in full load tonnage. These figures provide stark support to Gorshkov's claim of having created an oceangoing navy founded upon the submarine.⁵⁷

Gorshkov strongly implies that he was the driving force behind the dramatic qualitative change in the fleet as a whole and the equally impressive quantitative increases in the sizes of its individual components when he states "Around the middle 1950's... strong measures were taken for the creation of a powerful, ocean-going nuclear rocket fleet."⁵⁸ He probably is overstating his own role in this so-called "nuclear rocket revolution," but nonetheless deserves a great deal of the credit for hurrying along the essentially logical technical change process from guns to missiles a good deal faster than his counterparts in the Western navies. As a result, today's ships, infinitely more sophisticated and destructive than their 1955 predecessors, are the essence of a navy that has risen from third rate status just after World War II to first rate status today. Together with the naval aviation assets shown below they appear to constitute a force capable of posing a credible and perhaps overwhelming threat to NATO's use of the oceans in wartime. This total of over 1400 aircraft makes Soviet Naval Aviation a considerable power in its own right with significant anti-ship and ASW capabilities. Of the aircraft shown in Figure 12,

FIGURE 12

SOVIET NAVAL AVIATION, 1 DECEMBER 1978

MISSION:	STRIKE	FRT/ATK	RECON	ASW	EW	TNKR	TRNG	TRNS	TOTAL
TYPE:									
*Backfire	35+								35+
Badger	280		40		30	80			430
Blinder					40				40
Bear			UNK	70	UNK				70+
*Forger		30+							30+
*Fitter		30+							30+
Hound				100					100
*Hormone				250+	UNK				250+
*Haze				UNK					UNK
*May				55					55
Mail				90+					90+
Moss					5				5
Unk	25	10					80	200	315
Total	340+	70+	40+	565+	75+	80	80	200	1450+
%	23%	5%	3%	40%	5%	6%	6%	14%	100%

* Production Continues

Sources: Understanding Soviet Naval Developments, p. 70; Air Force Magazine, December, 1978, p. 70; Peter Rassmussen, "Soviet Naval Air Force," International Defense Review, 5/78, pp. 689-695; The Military Balance, p. 10; John M. Collins, American and Soviet Military Trends (Washington, D.C.: Center for Strategic and International Studies, 1978), p. 277; and Unclassified Communist Naval Orders of Battle, pp. 5-6.

the Backfire bomber, the Forger and Fitter fighter/attack aircraft, the May ASW aircraft and the Haze and Hormone ASW helicopters remain in production and deliveries to the fleet continue.⁵⁹

A review of the preceeding data, especially Figure 10, will show that the Soviet Navy has not undergone a large quantitative increase in the past 25 or 30 years, but rather what has happened is a dramatic qualitative increase in the offensive warfighting capability of the fleet. Additionally, it would seem that while Figures 2 through 9 hint at Soviet willingness to begin construction of a new class of ships whenever technology permits, the same data suggests a shift of emphasis in surface combatant design. This apparently reflects an evolution in the Soviet perception of the sea threat from a primary fear of carrier-based air attack in the 1950's to a current threat of attack by SLBMs launched from increasing greater distances. Thus in Figure 5 one sees in surface

vessel construction patterns a change in cruiser primary missions from surface action to limited ASW to primary ASW, the same primary mission as that assigned to the aviation cruisers and carriers. Furthermore, Figure 6 shows that while destroyers produced in the 1950's were chiefly intended for ASW, there was a change of emphasis in the early 1960's to anti-surface and anti-air roles, probably to counter the threat posed by American aircraft carriers. However, this seems to have been short lived, with the destroyers of the 1970's built basically for ASW. Significantly, all four classes of major surface combatants currently in production, - Kiev, Kara, Kresta II and Krivak II - are primarily ASW ships. Given the lack of an overseas naval air capability, this strongly supports the statement of Gorshkov's mentioned earlier that one of the main wartime tasks of surface ships is to support the main strike force of the navy, that is, the ballistic missile submarine.

SOVIET NAVAL WAR-FIGHTING CAPABILITIES

While one can see an obvious dedication to the development of a credible war-fighting capability in the Soviet Navy, it is still necessary to assess its strength both in terms of levels of violence and geography. It is unfortunate that the Soviets do not provide such an abstract framework, but former Secretary of the Navy, Paul Nitze, has postulated ten levels of violence that are helpful in this regard:⁶⁰

1. Intercontinental Counter Value
2. Intercontinental Counter Force
3. Intra-theater War
4. FEBA (i.e., Forward Edge of the Battle Area)
Nuclear War
5. Unilateral Self-Defense with Tactical Nuclear
Weapons on one's own Territory
6. Two Super Power Conventional War
7. One Super Power Conventional War
8. Proxy War
9. Guerrilla War
10. Psychological War

The Soviet Navy's war-fighting capability at level one (Counter Value) would seem to be very high. This mission, essentially attacks on cities and industry, would be assigned to the modern fleet ballistic missile submarines. On the other hand, the ability of the Soviet Navy to fight at level two (Counter Force) appears to be rather weak, since in order to be credible it must possess the means to attack either American land based or sea based strategic forces.

Insufficient information exists concerning the accuracy and destructive power of Soviet sea launched ballistic missiles for a judgement to be made about their effects on American missile silos, but there is the possibility that they could serve to 'pindown' U.S. ICBMs until the arrival of a strike by the heavier and more accurate Soviet ICBMs. Additionally, they are clearly able to attack American B-52 bases. However, as currently structured, the Soviet Navy does not appear to have the ability to locate, attack, and destroy NATO's SSBNs operating with the 2,500 nautical mile range A-3 and C-3 missiles. In order to accomplish this task it will be necessary for the USSR to develop the technology for the fleet to locate and attack allied missile submarines, under realtime conditions⁶¹ and to survive at sea beyond the range of Soviet land-based aircraft.⁶²

Levels three, four and five (Theater Nuclear War) are difficult to separate in terms of naval requirements, but it seems that Soviet capabilities are very good. While at least some of the ballistic missile submarines mentioned above would be held back for possible escalation, the other major combatants shown in Figure 10 appear to be well suited for these tasks. Additionally, one could expect the Soviets to employ much of their naval aircraft in an antiship role and, at the same time, rely heavily on the lighter and more limited (in terms of range and sea state) forces, which consist of 108 frigates, 111 corvettes and 120 missile attack craft.⁶³ In this regard, particular attention would have to be paid to the Backfire bomber, which has the ability to attack any surface vessel transiting from the United States to either north-west Europe or Japan, as well as all European and Japanese port facilities.⁶⁴ Production of this aircraft, in service since 1974, is expected to total 400, with approximately half assigned to Naval Aviation.⁶⁵ While he may have overstated the point, General Keegan, former Chief of Air Force Intelligence, in discussing the anti-ship capabilities of the Backfire, drew a parallel between that aircraft and the B-1 bomber and stated: "Fifty B-1s, armed with the proper air-to-surface missiles, could with high probability sink or cripple every major surface ship possessed by the communist nations in twenty-four to thirty-six hours."⁶⁶

The capability of the Soviet Navy to fight at level six (Two Super Power Conventional War) is open to question. Although the combatant vessels themselves seem to be adequate for sustained operations, even given a question of reloads for major weapon systems, the Soviets have some problems in terms of air cover for distant operations and support by service force ships. These vessels exist at a ratio of one for every 42 combatants in the Soviet Navy as opposed to a ratio of 1:15 in the U.S. Navy.⁶⁷ While they seem to be attempting to correct these shortcomings through the construction of the Kiev class carriers and the Boris Chilikin and Berezina classes of large fleet support ships,⁶⁸ much of the merchant marine is also capable of providing rapid and

valuable support to the fleet. Moreover, as a continental power, with little reliance on sea lines of communications for essential material, in a conventional war with NATO the Soviet Union has the easier naval missions, i.e., denial and/or interdiction. In addition to keeping sea lanes open for power projection and the movement of war material, and tracking Soviet ballistic missile submarines for future attack in the event of nuclear escalation, in such a conflict NATO naval forces would have to ensure the uninterrupted flow of oil from the Persian Gulf to West Europe and Japan. It is over eleven thousand nautical miles from the Persian Gulf to the English Channel, and almost the same distance from the Gulf to American East coast ports. The bulk of the West's peacetime oil must travel this route, while nearly all of Japan's must travel almost seven thousand nautical miles from the Gulf to Yokohama. These facts, while not conclusive, strongly suggest a Soviet capability to fight a sustained conventional war at sea with primary reliance on submarines and strike aircraft, even though Gorshkov himself doubts the possibility of such a war and appears to have achieved this capability as a spinoff of the ability to fight at the higher levels.

The ability to fight at the remaining four levels of violence (Limited and Psychological Wars) flows logically from those discussed above. Moreover, it is at this lower end of the spectrum that one must give the Soviets credit for a real naval power projection capability in certain geographical areas based on their naval infantry, amphibious forces, and merchant marine.⁶⁹ Thus, as a result of their thirty year naval construction program, it would appear that, with the exception of intercontinental counter force operations against NATO fleet ballistic missile submarines, the Soviets have developed a fleet capable of fighting across the entire violence spectrum.

GORSHKOV'S FLEET DISTRIBUTION PATTERNS

A final area of interest in examining Soviet naval capabilities is the pattern of ship and aircraft assignments to the four fleets. These are shown in Figures 13 and 14 respectively.

One can immediately see from these figures that almost half of the Soviet Navy is assigned to the Northern Fleet. In terms of modern ships the percentage is even higher, with the majority of the gun cruisers and destroyers assigned to the Baltic and Black Sea Fleets, where presumably they can still play an important role in support of operations ashore. Moreover, the relatively high percentages of ASW aircraft attributed to the Baltic Fleet are in fact composed of old Hound ASW shore based helicopters.⁷¹ Thus, one can conclude from these figures that the Northern Fleet and, to a lesser extent, the Pacific Fleet are considered by the Soviets

FIGURE 13

APPROXIMATE DISTRIBUTION OF MAJOR COMBATANTS BY FLEET
1 JANUARY 1978

<u>FLEET</u> <u>TYPE</u>	<u>NORTHERN(%)</u>	<u>BALTIC(%)</u>	<u>BLACK(%)</u>	<u>PACIFIC(%)</u>	<u>TOTAL</u>
Attack Subs	90(46)	29(15)	27(14)	49(25)	195
Cruise Subs	41(57)	3(4)	3(4)	25(35)	72
Ballistic Subs	58(64)	6(7)		26(29)	90
Gun Cruisers	1(8)	2(17)	6(50)	3(25)	12
Missile Cruisers	10(40)	2(8)	7(28)	6(24)	25
Gun Destroyers	5(9)	24(41)	16(28)	13(22)	58
Missile Destroyers	14(24)	11(19)	18(31)	15(26)	58
Carriers	1(25)		2(50)	1(25)*	4
Total	220(43)	77(15)	79(15)	138(27)	514

*Tentative⁷⁰

Source: Moore, Jane's 1978-79, p. 484. (N.B. This figure credits the Soviet Navy with 18 more major combatants than does the total given in Figure 10. However, while the sources for Figure 10 are considered more consistent, fleet distribution patterns were not given. The percentages in this figure are considered reliable, although the gross numbers may be a bit high.)

to be their most important naval formations. It would appear that geography is the basic reason for this viewpoint, with the Baltic and Black Sea Fleets being essentially landlocked and unable to obtain unopposed access to the open sea in time of war, except through the internal canal and river system, which will accommodate ships up to Krivak size, or 3,600 tons. Nevertheless, both of these fleets possess sufficient strength to contest seriously the use of those waters by any hostile powers. On the other hand, even though the GIUK Gap represents a considerable barrier for the Northern Fleet, that fleet is located in the best of available positions for warfare in the Atlantic. The Pacific Fleet also is well suited to threaten Japan, China, Southeast Asia, and, given passage through the Straits of Malacca (or be faced with a 7,000 nautical mile detour around Australia), merchant activity in the Indian Ocean.

FIGURE 14

PERCENTAGE DISTRIBUTION OF NAVAL AIRCRAFT BY FLEET
1 JANUARY 1976

<u>FLEET</u> <u>TYPE</u>	<u>NORTHERN</u>	<u>BALTIC</u>	<u>BLACK</u>	<u>PACIFIC</u>
STRIKE	55	23	13	9
FTR/ATK	—	50	—	50
RECON	50	18	23	9
ASW	42	37	13	8
EW	43	19	19	19
TNKR	50	20	15	15

Source: Robert P. Berman, "Soviet Naval Strength and Deployment," "Soviet Naval Influence," eds. Michael McGuire and John McDonnell (New York: Praeger Publishers, 1977), p. 326.

CONCLUSIONS

In conclusion we must return to Gorshkov's statements of what he expects his navy to be able to do. He has called for a "blue water" navy that combines peacetime presence with the ability to win a short, violent, global war by successfully striking the enemy homeland and defeating his attacks from the sea. In short, Gorshkov argues for both a counter value and a counter force capability. The creation of such a navy would also provide the strength necessary to fight at lower levels of violence with a fleet, which if not ideal by Western standards, is certainly credible, and to carry out the peacetime mission of presence. When one combines these doctrinal statements with an examination of the naval construction programs, several key conclusions emerge.

First of all, Gorshkov's call for a modern "blue water" navy composed of balanced forces appears to be born out in fact, as indicated by Figures 9 and 12, which show a steady uninterrupted pace of fleet modernization with deliveries of thirteen classes of major warships and six types of aircraft continuing. Additionally, Figure 9 shows that if past patterns are any guide we may soon see the emergence of a new class of destroyers; new nuclear attack and cruise missile submarine classes, and a new escort class.

Secondly, one of the two primary wartime missions described by Gorshkov, that of attacking land targets in the United States, seems

to be clearly met by at least a portion of the 94 ballistic missile submarines shown in Figure 10. In particular, the 31 boats of the Delta classes and perhaps the new Typhoon class, each equipped with missiles that have ranges in excess of 4,000 nautical miles, could fulfill this requirement while operating in the area of Petropavlovsk on the Pacific coast and in the Norwegian and Barents Sea, well to the north of the GIUK Gap and, more critically, under the cover of Soviet landbased aviation.

However, the capability to accomplish the other primary wartime mission, that of blunting enemy nuclear attacks from the sea, or more simply naval counter force, seems to lag seriously behind Gorshkov's written statements. Just as the long ranges of the SS-N-8 and SS-N-18 missiles on the Delta and possibly the Typhoon submarines give their navy the capability to operate virtually in the Soviet Union's territorial waters, so do the increased ranges of the American C-3 and C-4 SLBMs (2,800 and 4,200 nautical miles respectively) seriously hamper Soviet ASW efforts. In either case, the hunter is required to operate within range of the opponent's landbased aircraft, a situation which may well limit sustained anti-ballistic missile submarine operations to nuclear submarines. Thus, Soviet offensive ASW efforts against Western ballistic missile submarines would not meet Gorshkov's self-imposed critical requirement of being combined operations by submarines, surface ships, and aircraft. On the other hand, Soviet defensive ASW operations against NATO attack submarines seeking out Soviet ballistic missile boats would be very strong indeed, composed of surface, subsurface and aviation ASW forces, all operating under the protection of landbased aircraft.

While Gorshkov's technology in this instance may lag behind his doctrine, it would seem that the USSR is making major efforts to close the gap. In addition to efforts to improve the current twenty nautical mile range of the SSN-15, a subsurface-to-subsurface missile similar to the American SUBROC and currently in service on the Victor II, Charlie II and Tango classes of submarines,⁷² there are a number of suggestions of strategic ASW research which centers around ballistic missiles and the Yankee class submarines.

One version of this concept would be to retro-fit the Yankee boats with a missile similar to the SSN-X-13, which when coupled with an external target acquisition and guidance system such as a satellite, would allow these boats to successfully attack enemy submarines.⁷³ While this system requires a breakthrough in non-acoustic submarine detection, more than "800,000 scientists and engineers are now estimated to be engaged full time in R&D,"⁷⁴ and, as stressed by Dr. Malcolm Currie, Director of Defense Research and Engineering: "...there are gaps and unknowns in our understanding of Soviet military RDT&E activities and intents, [which]

may represent a significant percentage of the Soviet military RDT&E budget.... Some of these enigmas... may be directed against our fleet ballistic missile submarines."⁷⁵ Thus one reads of Soviet submarine detection research based upon "infrared, laser, radar, magnetic, gas analysis,⁷⁶ radiation, wave detection, and even psychic detection...."

The second variant on this theme involves the use of landbased ballistic missiles as sea barrage weapons. In 1972 the Soviet Defense Minister, Marshall Grechko, addressed this concept by stating that "the Strategic Rocket Forces'...missions in war include...the destruction of the imperialist's fleet at sea..."⁷⁷ Two years later Gorshkov himself spoke along similar lines when he declared "The subsequent mutual overlapping of the combat missions of the services...creates the necessary conditions to achieve victory in the continental and ocean theaters of combat operations. This is the result of the ability of the other services to operate together with the navy in the accomplishment of the latter's missions..."⁷⁸

Interestingly, the adoption of either of the two latter concepts could possibly allow the Soviets to explain away their apparent violation of the SALT I limit of 62 modern ballistic missile submarines or future SALT limits on either subtotals or aggregates. As Figure 4 shows they have produced as many as 65 Yankee and Delta class boats, and apparently have recently begun production of the Typhoon class.⁷⁹ However, conversion of the older Yankee boats to an ASW role could allow the USSR to attempt to claim them as tactical systems, not strategic systems. Or, as a second option, the employment of landbased ballistic missiles as ASW systems would permit the Soviet Union to assert that the Yankee boats have replaced these weapons as theater systems and therefore no longer count against a strategic limit. Although the logic is tenuous, this has not seemed to hamper the Soviet Union in previous negotiations.

This analysis of Gorshkov's doctrinal statements and construction programs indicates that he has accomplished his strategic attack mission by building a ballistic missile submarine force. This force will be protected in war as the result of the development of a naval air force and a surface and subsurface covering fleet. At the same time he has continued to attempt to solve the increasingly difficult problem of strategic defense through extensive research in strategic antisubmarine warfare. While his fixed budget has effected the construction of ships that would complement other forms of naval warfare, he has nevertheless achieved a substantial ability to fight at sea during non-strategic conflicts while operating from base areas which, if not ideal, are at least adequate to the task. Therefore, while Gorshkov may or may not be correct in asserting that "Today our armed forces have in their composition a completely modern ocean-going navy equipped with everything for

the successful completion of all assigned missions on the expanses of the World Ocean,⁸⁰ his works deserve to be closely studied as a guide to future fleet development and employment.

FOOTNOTES

¹John E. Moore (ed.), Jane's Fighting Ships, 1978-1979 (London: Macdonald and Jane's Publishers Limited, 1978), p. 128.

²S. G. Gorshkov, Morskaya Moshch' Gosudarstva (Moskva: Voenizdat, 1976), p. 1.

³Harry N. Howard, Turkey, the Straits and U.S. Policy (Baltimore: The Johns Hopkins University Press, 1974), p. 294.

⁴S. G. Gorshkov, "Bol'shiye Zadachi Sovetskogo Flota," Krasnaya Zvezda, February 5, 1963, p. 2.

⁵Understanding Soviet Naval Developments (Washington: Office of the Chief of Naval Operations, January, 1978), p. 14.

⁶S. G. Gorshkov, "Nekotoryye Problemy Osvoeniya Mirovogo Okeana," Morskoy Sbornik, No. 2 (1973), pp. 13-14.

⁷Noel Grove and Martin Rodgers, "Sailing with the Super-tankers," National Geographic, Vol. 154, No. 1, (July, 1978), p. 107.

⁸Gorshkov, Morskaya Moshch', pp. 3-4.

⁹S. G. Gorshkov, "Voyenno-Morskiye Floty v Voynakh i v Mirnoye Vremya," Morskoy Sbornik, No. 2 (1972), p. 23.

¹⁰Gorshkov, Morskaya Moshch', p. 7.

¹¹Ibid.

¹²Ibid., pp. 154-155.

¹³Ibid., pp. 457.

¹⁴Ibid., p. 252.

¹⁵Ibid., pp. 461-462.

¹⁶Ibid., pp. 283-285.

¹⁷Ibid., p. 280.

¹⁸Ibid., p. 341.

¹⁹Ibid., p. 413.

²⁰Ibid., p. 121.

²¹Ibid., p. 298.

²²Ibid., p. 17.

²³Ibid., pp. 106-107.

²⁴Ibid., p. 305.

²⁵Ibid.

²⁶Estimated Soviet Defense Spending: Trends and Prospects
(Washington, D.C.: Central Intelligence Agency, June, 1978),
pp. 3 and 5.

²⁷Gorshkov, Morskaya Moshch', p. 292.

²⁸Ibid., p. 354.

²⁹Ibid., p. 455.

³⁰Ibid., p. 307.

³¹Ibid., pp. 319-320.

³²Ibid., p. 315.

³³Ibid., p. 286.

³⁴Ibid., p. 13.

³⁵Ibid., p. 12.

³⁶Ibid., p. 456.

³⁷S. G. Gorshkov, "Naval Might of Soviet Power," Soviet Military Review, No. 7 (July, 1965), pp. 4-5.

³⁸Gorshkov, Morskaya Moshch', p. 364.

³⁹Ibid., pp. 467-368.

⁴⁰Ibid., pp. 165-166 and pp. 196-197.

⁴¹Ibid., pp. 311-312.

⁴²Ibid., pp. 325-329.

⁴³Ibid., pp. 317-326.

⁴⁴John E. Moore, The Soviet Navy Today (London: Macdonald and Jane's Publishers Limited, 1975), p. 19.

⁴⁵Moore, Jane's 1978-79, p. 483; and Aviation Week, April 3, 1978, p. 17.

⁴⁶Siegfried Breyer and Norman Polmar, Guide to the Soviet Navy (2nd. ed. Annapolis: Naval Institute Press, 1977), p. 548.

⁴⁷George R. Lindsey, "Tactical Anti-submarine Warfare: The Past and the Future," Adelphi Paper No. 122 (Spring, 1976), p. 30.

⁴⁸Jean Laboye Couhat, Combat Fleets of the World, 1976/77, trans. James J. McDonald (Annapolis: Naval Institute Press, 1976), passim.

⁴⁹"Soviets Building Giant Nuke Ship," Stars and Stripes, January 21, 1979, p. 28.

⁵⁰Moore, Jane's 1978-79, p. 483.

⁵¹Breyer, Guide to the Soviet Navy, pp. 187-212.

⁵²Moore, Jane's 1978-79, p. 128.

⁵³David Rees, "Soviet Sea Power: The Covert Support Fleet," Conflict Study No. 84 (London: Institute for the Study of Conflict, 1977), p. 2.

- ⁵⁴Moore, Soviet Navy Today, p. 52.
- ⁵⁵Moore, Jane's 1978-79, p. 131.
- ⁵⁶Norman Polmar, "The Soviet Naval Air Force," U.S. Naval Institute Proceedings (March, 1977), p. 99.
- ⁵⁷Gorshkov, Morskaya Moshch', pp. 307 and 457.
- ⁵⁸Ibid., p. 291.
- ⁵⁹Peter Rassmussen, "Soviet Naval Air Force," International Defense Review, 5/78, pp. 689-695.
- ⁶⁰Paul Nitze, "The Relationship of Strategic and Theater Nuclear Forces," International Security, Vol. 2, No. 2 (Fall, 1977), pp. 122-123.
- ⁶¹Norman Polmar, "Thinking About Soviet ASW," U.S. Naval Institute Proceedings, Naval Review, 1976, pp. 125-126; and K. J. Moore, "Antisubmarine Warfare," in McGwire, Soviet Naval Influence, pp. 190-197.
- ⁶²Polmar, "Soviet Air Force," pp. 98-100; and Understanding Soviet Naval Developments, p. 22.
- ⁶³Moore, Jane's 1978-79, p. 484.
- ⁶⁴William D. O'Neil, "Backfire: Long Shadow on the Sea-Lanes," U.S. Naval Institute Proceedings (March, 1977), pp. 30-31.
- ⁶⁵Ibid., p. 30.
- ⁶⁶George J. Keegan, "An Editorial in the Form of a Letter," Strategic Review, 5 (Spring, 1977), p. 10.
- ⁶⁷J. T. Westwood, "Soviet Naval Strategy, 1968-1978: A Reexamination," U.S. Naval Institute Proceedings, Naval Review, 1978, p. 124.
- ⁶⁸Moore, Jane's 1978-79, p. 483.
- ⁶⁹Understanding Soviet Naval Developments, pp. 37-38 and pp. 51-54.

⁷⁰(London) Times, August 1, 1978, p. 15.

⁷¹Robert P. Berman, "Soviet Naval Strength and Deployment," Soviet Naval Influence, eds. Michael McGwire and John McDonnell (New York: Praeger Publishers, 1977), p. 326.

⁷²Moore, "Antisubmarine Warfare," p. 197.

⁷³Richard T. Ackley, "The Wartime Role of Soviet SSBNs," U.S. Naval Institute Proceedings (June, 1978), p. 37.

⁷⁴George S. Brown, United States Military Posture For FY79 (Washington, D.C.: Department of Defense, January 20, 1978), p. 104.

⁷⁵Malcom R. Currie in Polmar, "Thinking About Soviet ASW," p. 126.

⁷⁶Ibid., p. 125.

⁷⁷A. A. Grechko, "Armi Sotsialisticheskaya Mnogonatsional'naya," Krasnaya Zvezda, December 17, 1972, p. 2.

⁷⁸S. G. Gorshkov, "Nekotoryye Voprosy Razvitiya Voyenno-Morskogo Iskusstva," Morskoy Sbornik, No. 12 (1974), p. 29.

⁷⁹"Subs Raise SALT Observance Question," Aviation Week & Space Technology, (April 3, 1978), p. 17; and Armed Forces Journal, March, 1979, p. 16.

⁸⁰Gorshkov, "Nekotoryye Problemy," p. 24.

BIBLIOGRAPHY

1. Ackley, Richard T. "The Wartime Role of Soviet SSBNs," U.S. Naval Institute Proceedings, Vol. 104 (June, 1978), pp. 34-43.
2. Berman, Robert P. "Soviet Naval Strength and Deployment," Soviet Naval Influence. Edited by Michael McGwire and John McDonnell, New York: Praeger Publishers, 1977.
3. Breyer, Siegfried, and Norman Polmar, Guide to the Soviet Navy, 2d ed. Annapolis: Naval Institute Press, 1977.
4. Brown, George S., United States Military Posture For FY79, Washington, D.C.: Department of Defense, January 20, 1978.
5. Collins, John M. American and Soviet Military Trends, Washington, D.C.: Center for Strategic and International Studies, 1978.
6. Couhat, Jean Laboyle Combat Fleets of the World, 1976/77. Translated by James J. McDonald, Annapolis: Naval Institute Press, 1976.
7. Estimated Soviet Defense Spending: Trends and Prospects, Washington, D.C.: Central Intelligence Agency, June, 1978.
8. Gorshkov, S. G. "Bol'shiye Zadachi Sovetskogo Flota" (Great Missions of the Soviet Fleet), Krasnaya Zvezda, February 5, 1963.
9. Gorshkov, S. G. Morskaya Moshch' Gosudarstva (The Sea Power of the State), Moskva: Voenizdat, 1976.
10. Gorshkov, S. G. "Naval Might of Soviet Power," Soviet Military Review, No. 7 (July, 1965), pp. 3-6.
11. Gorshkov, S. G. "Nekotoryye Problemy Osvoeniya Mirovogo Okeana" (Some Problems of Mastering the World Ocean), Morskoy Sbornik, No. 2 (1973), pp. 13-25.
12. Gorshkov, S. G. "Nekotoryye Voprosy Razvitiya Voenno-Morskogo Iskusstva" (Some Questions about the Development of Naval Art), Morskoy Sbornik, No. 12 (1974), pp. 24-32.
13. Gorshkov, S. G. "Voenno-Morskiya Floty v Voynakh i v Mirnoye Vremya (Navies in War and Peace), Morskoy Sbornik, No. 2 (1972), pp. 20-29.
14. Grechko, A. A. "Armii Sotsialisticheskaya Mirovatsional'naya" (A Multinational Socialist Army), Krasnaya Zvezda, December 17, 1972.

15. Grove, Noel and Martin Rodgers, "Sailing with the Super-tankers," National Geographic, Vol. 154, No. 1 (July, 1978), pp. 102-124.
16. Howard, Harry N. Turkey, the Straits and U.S. Policy, Baltimore: The Johns Hopkins University Press, 1974.
17. Hughes, Richard, "New Carrier to Join Soviet Far East Fleet," The Times, (London), August 1, 1978.
18. Jane's Fighting Ships, 1955-56, London: Jane's Fighting Ships Publishers Company, Ltd., 1955.
19. Keegan, George J. "An Editorial in the Form of a Letter," Strategic Review, 5 (Spring, 1977), pp. 6-11.
20. Lindsey, George R. "Tactical Anti-submarine Warfare: The Past and the Future," Adelphi Paper No. 122, London: International Institute for Strategic Studies, Spring, 1976.
21. "Military Balance," Air Force Magazine (December, 1978), pp. 64-70.
22. Military Balance 1978-1979, London: International Institute for Strategic Studies, 1978.
23. Moore, John E. (ed.), Jane's Fighting Ships, 1978-79, London: Macdonald and Jane's Publishers Limited, 1978.
24. Moore, John E. The Soviet Navy Today, London: Macdonald and Jane's Publishers Limited, 1975.
25. Moore, K. J. "Antisubmarine Warfare," Soviet Naval Influence, Edited by Michael McGwire and John McDonnell, New York: Praeger Publishers, 1977.
26. Nitze, Paul, "The Relationship of Strategic and Theater Nuclear Forces," International Security, Vol. 2, No. 2 (Fall, 1977), pp. 122-132.
27. O'Neil, William D. "Backfire: Long Shadow on the Sea-Lanes," U.S. Naval Institute Proceedings, Vol. 103 (March, 1977), pp. 26-35.
28. Polmar, Norman, "Soviet Naval Air Force," U.S. Naval Institute Proceedings, Vol. 103 (March, 1977), pp. 96-101.
29. Polmar, Norman, "Thinking About Soviet ASW," U.S. Naval Institute Proceedings, Vol. 102 (May, 1976), pp. 108-129.
30. Pretty, R. T. (ed.), Jane's Weapon Systems, 1977, London: Jane's Yearbooks, 1977.

31. Rasmussen Peter, "Soviet Naval Air Force," International Defense Review, 5/78, pp. 689-695.
32. Rees, David, "Soviet Sea Power: The Covert Support Fleet," Conflict Study No. 84, London: Institute for the Study of Conflict, 1974.
33. Robinson, Clarence A., Jr. "Soviet Submarines Violate Pact," Aviation Week & Space Technology (February 27, 1978), pp. 14-15.
34. Schemmer, Benjamin F., "Pentagon Covered-Up Unprecedented 1978 USSR Strategic Arms Build-Up," Armed Forces Journal (March, 1979), pp. 14-16.
35. "Soviets Building Giant Nuke Ship," Stars and Stripes, January 21, 1979.
36. "Subs Raise SALT Observance Question," Aviation Week & Space Technology (April 3, 1978), p. 17.
37. Unclassified Communist Naval Orders of Battle, Washington: Defense Intelligence Agency, November, 1978.
38. Understanding Soviet Naval Developments, Washington: Office of the Chief of Naval Operations, January, 1978.
39. Westwood, J. T. "Soviet Naval Strategy, 1968-1978: A Reexamination," U.S. Naval Institute Proceedings, Naval Review, 1978, pp. 114-127.